

A new species and a new record of termitophilous Staphylinidae (Coleoptera) associated with *Fulleritermes* Coaton in Rhodesia.*

by

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Physoperinthus setosus is described as new from Rhodesia and is associated with
Fulleritermes coatonii Sands. A new record of *Fulleritermes coatonii* from Rhodesia is
given. The coevolution of the termitophile species associated with *Fulleritermes*
is briefly discussed. These are the first records of both genera from Rhodesia.

INTRODUCTION

The purpose of this paper is to describe a new species of *Physoperinthus*
Pasteels and Kistner collected from a nest of *Fulleritermes coatonii* Sands by Dr W. G. H.
Coaton as part of the South African Termite Survey of Rhodesia. This is the first
termitophile reported from this species of *Fulleritermes*. A new Rhodesian record of
Fulleritermes coatonii by Kistner is also reported. For generic descriptions of *Physoperinthus*
and *Fulleritermes* see papers by Pasteels and Kistner (1970) and Kistner (1970).

TRIBE TERMITONANNINI

Subtribe Perinthina

Physoperinthus setosus spec. nov.

Related to *P. coatonii* by its lighter sclerotization but separable by the different
chaetotaxy of the ventral abdomen. Colour light reddish brown throughout except for
the extensive abdominal membranes which are white. Elytra a little darker than the
rest of the body. Dorsal surface of the head, pronotum, and elytra with many fine
yellow setae. These are more numerous on the elytra and pronotum than on the head.
Ventral surfaces of head and thorax with very few fine yellow setae. All abdominal
sternites with an apical row of darker setae. Chaetotaxy of the middle of the sternites
(i.e. other than the apical row) as follows: III, 15; IV, 18; V, 15; VI, 12; VI, 12; VIII,
10. Genitalia unknown.

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Measurements (in mm): head length, 0,25; pronotum length, 0,25; elytra length, 0,21; length of rounded portion of sternite IV, 0,34. Number measured, 1.

MATERIAL EXAMINED. Holotype: No. 15476 female, RHODESIA, Distr. Chilimanzi, 56 km ex Sebakwe National Park Headquarters – Umvuma, 19° 0–15'S., 30° 16–30'E., 14 October 1974, from a group of nest calies in soil beneath a grass stool which also yielded the primary queen, Nest TM 30676, Coll. W. G. H. Coaton, No. T-895. In the National Collection of Insects, Pretoria.

The host termites were determined to be *Fulleritermes coatonii* Sands by W. G. H. Coaton and are in the National Collection of Insects, Pretoria.

Revised Key to the Species of *Physoperinthus*

- | | |
|---|-----------------|
| 1 Paratergites darker than the membranes which surround them | 2. |
| Paratergites nearly as white as the membranes which surround them | setosus |
| 2 Head and pronotum dark reddish brown; smaller species, head length, 0,20 mm | coatonii |
| Head and pronotum light reddish brown, lighter than the elytra; larger species, head length 0,25 mm | joseni |

TRIBE COROTOCINI

Subtribe Corotocina

Fullerioxenus coatonii Kistner

Fullerioxenus coatonii Kistner 1970: 187, figs 20, 22–5; National Collection of Insects, Pretoria, South West Africa, 20 miles ex Samangeigei – Tsotsana, 30 miles ex Kapupahedi – Sja Sja Sja, with *Fulleritermes contractus*.

MATERIAL EXAMINED. 1, RHODESIA, Distr. Lupane, 48 km ex Kenmaur – Victoria Falls, 18° 45–60'S., 27° 30–45'E., 11 October 1972, ex nest cells under prone log, Nest TM 26839, Coll. G. F. Pretorius, No. T-860 (NCI) (New Record).

The host termites were determined to be *F. contractus* (Sjoestedt) by W. G. H. Coaton and are in the National Collection of Insects, Pretoria.

DISCUSSION

The new species described above brings the number of species of termitophilous Staphylinidae associated with *Fulleritermes* to 5. The species with their hosts are listed in Table 1.

TABLE 1.—Staphylinidae associated with *Fulleritermes*.

Termite Species	Termitophile Species
<i>Fulleritermes coatonii</i>	<i>Physoperinthus setosus</i>
<i>F. contractus</i>	<i>P. coatonii</i>
	<i>Fullerioxenus coatonii</i>
	<i>Coatonachthodes ovambalandicus</i>
<i>F. tenebricus</i> (Silvestri)	<i>P. joseni</i>

The closest relative of *Physoperinthus* is *Catalina* Pasteels which is found with *Leptomysotermes doriae* (Silvestri). *Gralloperinthus* Kistner, found with *Grallatotermes africanus* Harris, is also related. These termite genera are all phylogenetically related Sands (1965). Therefore, it is highly likely that the staphylinid genera evolved with the termites as they differentiated into different genera. If the different species of *Fulleritermes* are related to each other as the species of *Physoperinthus* are, *F. coatonii* should be the most distinctive species, and *F. contractus* should be more closely related to *F. tenebricus*. These relationships between the species of *Fulleritermes* are those shown by the soldier morphology (Sands 1965).

Coatonachthodes ovambalandicus Kistner is most closely related to *Spirachthodes madecassus* Seevers, known from a nest of *Nasutitermes kauderianus* (Sjoestedt). This has been placed in a new genus, *Kaudernitermes* by Sands & Lamb (1975), who have shown it to be related to *Fulleritermes* as predicted by Kistner (1968).

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